

REMARKS

The Office rejected claims 1-6. With this paper, none of the claims are amended, none are canceled, and new claims 7-9 are added. The application now includes claims 1-9.

**Claim Rejections under 35 USC §103**

*1. Claims 1-4 are rejected under 35 USC §103(a) as being unpatentable over Cramer et al (U.S. Publication 2002/0150678, Cramer hereinafter) in view of Huang et al (U.S. Publication 2003/0007052, Huang hereinafter).*

The present invention pertains to a so-called "discharging ink." The discharging ink is capable of "discharging a cloth containing polyester fiber that is colored in advance" (page 1 line 10 of the instant specification). As further explained in the entire Background Art section and the first paragraph of the Disclosure of Invention section of the specification, the discharging ink is a chemical solution that discharges a dye from a cloth that is previously colored with the dye. The discharging ink of the present invention, therefore, serves the purpose of "discharging," *i.e.* drawing out the dye from the cloth.

The "discharging ink" comprises: (1) a nonionic surfactant having HLB value of 9 to 16 and ethylene oxide-added mol number of at most 30, (2) a guanidine weak acid salt (*i.e.* a salt of guanidine with a weak acid such as carbonic acid) and (3) water (claim 1). The discharging ink is applied by ink jet printing on an already colored (dyed) polyester fiber cloth for preparing a so-called "discharged polyester fiber cloth" (page 1, lines 7-18). The nonionic surfactant having an HLB value in the claimed range has the effect of drawing out the dye from the cloth. The guanidine weak acid salt softens the cloth so that the nonionic surfactant effectively draws out the dye from the cloth. With a combination of the nonionic surfactant and the guanidine weak acid salt in the discharging ink, and the HLB value of the nonionic surfactant in the claimed range (see Examples 1 and 2), the discharging properties (measured by reflection densities before and after discharging) of the cloth samples are significantly better than that with only the

nonionic surfactant (Comparative Example 3) or only the guanidine weak acid salt (Comparative Example 4).

The primary reference, Cramer, relates to a coating composition for applying on surfaces of various soft materials and fabrics for improving properties of the surfaces. The properties improved include clearing, wettability, liquid strike-through, comfort, stain resistance, soil removal, malodor control, modification of surface friction, reduced damage to abrasion and color enhancement, and so on (Abstract). The coating composition comprises nanoparticles and a nonionic surfactant having an HLB value of 5 to 20 (paragraph [0119]). Coating techniques include spraying and ink jet printing (paragraphs [0151] and [0155], cited by the Examiner). The resulting coating layer prevents stains from setting into the surfaces (paragraph [0174], Figs. 1-3).

Although the Examiner has already acknowledged that Cramer does not teach or suggest a coating composition that comprises a guanidine weak acid salt, he fails to recognize that Cramer does not teach or suggest that the coating composition may be used as a discharging ink for discharging a cloth that is colored in advance, wherein the term "discharging" is defined by the present invention as drawing out the dye from the cloth.

On page 2, line 12 of the Office Action, the Examiner states that: "Carmer [sic] et al. discloses discharging the ink (coating composition) for inkjet printing on cloth...." (emphasis added). Here the word "discharging" clearly means "applying" *i.e.* Cramer discloses applying the ink (coating composition) by inkjet printing on the cloth. This teaching has nothing to do with the property of the ink.

The secondary reference, Huang, discloses a method of preparing an inkjet ink imaged lithographic printing plate. Huang teaches applying a costing comprising a diazonium material on the plate to form a reactive coating layer, and applying, by ink jet printing, an ink containing guanidine weak acid to form an image on the coated plate. The imaged regions (*i.e.* the regions with the guanidine weak acid-containing ink applied) are more developer-insoluble than the regions without the ink, thanks to the chemical reactions between the reactive coating material and the guanidine weak acid in the ink. Therefore, when a developer is applied on the plate, the imaged regions are

NOT removed by the developer.

Huang's teaching is clearly away from the present invention. In Huang, the role of the guanidine weak acid is for stabilizing/immobilizing the coating material, so that the developer would not dissolve the coating at the printed regions. In the present invention, on the other hand, the guanidine weak acid salt softens the cloth so that the nonionic surfactant effectively draws out the dye from the cloth. This is to say that the guanidine weak acid helps to destabilize/mobilize the dye so it can be washed away.

Therefore, none of Cramer and Huang teaches or suggests using the guanidine weak acid in a discharging ink. Furthermore, the combination of Cramer and Huang does not result in the present invention, wherein a composition of a nonionic surfactant having an HLB value of 9 to 16 and ethylene oxide-added mol number of at most 30, a guanidine weak acid salt and water is used as a discharging ink for drawing out dye from the cloth.

Based on the foregoing, the discharging ink composition of claim 1 is patentable. Applicant respectfully requests the rejection of claim 1, and dependent claims 2-4, be reconsidered and withdrawn.

*2. Claims 5-6 are rejected under 35 USC §103(a) as being unpatentable over Cramer in view of Huang.*

On page 3, in the numbered paragraph 2 of The Office Action, this rejection is written as "unpatentable over Carmer [sic] et al. (# US 2002/0150678) in view of Taguchi et al. (# US 2004/0194661)." Applicant understands this was meant to be "*unpatentable over Cramer in view of Huang.*"

Claim 5 is a process for preparing discharged polyester fiber cloth. The process comprises a step of injecting a discharging ink on a colored cloth comprising polyester fiber by an ink jet, a step of wet heat treatment or dry heat treatment at 150 to 190°C, and a step of soaping treatment. The discharging ink has the patentable composition as in claim 1. Therefore, claim 5 is also patentable. Applicant respectfully requests the rejection of claim 5, and dependent claim 6, be reconsidered and withdrawn.

*3. Claims 1-4 are rejected under 35 USC §103(a) as being unpatentable over Cramer in view of Taguchi et al (U.S. Publication 2004/0194661, Taguchi hereinafter).*

*4. Claims 5-6 are rejected under 35 USC §103(a) as being unpatentable over Cramer in view of Taguchi.*

Applicant respectfully submits that, the Taguchi reference, filed in the U.S. on March 24, 2004, is not a valid prior art reference under any sections of 35 USC §102.

The present application claims priority to the Japanese Patent Application No. 2003-340024 filed on September 30, 2003. Therefore, the effective filing date of the present application predates the valid prior art date of the Taguchi reference. With this paper, a certified English translation of the priority document JP 2003-340024 is submitted. Applicant respectfully requests the above rejections of the claims based on the Taguchi reference be withdrawn.

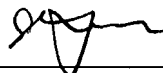
### **Conclusion**

For all the foregoing reasons, it is believed that all the claims of the instant application are patentable, and their passage to issue is earnestly solicited. Applicant's agent urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

Date: Oct. 15, 2007

WARE, FRESSOLA, VAN DER SLUYS  
& ADOLPHSON LLP  
755 Main Street, P.O. Box 224  
Monroe, Connecticut 06468  
Phone: (203) 261-1234

Respectfully submitted,

  
\_\_\_\_\_  
Shiming Wu  
Attorney for the Applicant  
Registration No. 56,885